
DEATHS DUE TO DRUGS & POISONS: 2001

In 2001, there were 165 deaths due to drugs and poisons (excluding those due to carbon monoxide). This comprised approximately 10.5% of all deaths investigated (165/1578). The total number of drug caused deaths has decreased compared to 2000 figures when there were 234 drug deaths. The 165 drug caused deaths in 2001 is the lowest number recorded of drug related deaths in King County since 1993 when there were 150 in this category. In 2001, there were sixty-four (64) opiate-caused deaths and forty-six (46) cocaine-caused deaths. Deaths due to drugs and poisons comprised 25% (165/665) of all suicides, accidents, and undetermined deaths combined.

Of the drug/poison deaths in 2001, 35% (57/165) were due to a single drug or poison, and 65% (108/165) were the result of drugs or poisons in combination. The year 2001 continued the trend of the majority of drug deaths being the result of multiple drug intoxication (66% in 2000, 66% in 1999, 67% in 1998, 72% in 1997 and 66% in 1996). Tables 9-3, 9-4, 9-5, and 9-6 display the various categories of drugs that caused death in 2000.

Because of their prevalence, ethanol, cocaine (a stimulant), and opiates (narcotic) are identified as separate drug categories. Other categories include analgesics, anesthetic agents, anticonvulsants, antidepressants, antihistamines, antihypertensives, antipsychotics, barbiturates, cardiac medications, gastrointestinal medications, inhalant/solvents, marijuana, muscle relaxants, prescription opiates, stimulants, stimulants/hallucinogens, tranquilizers, and other drugs/poisons.

The manners of "accident", "suicide", and "undetermined" are represented in the deaths due to drugs and poisons. In 2001, as in 2000 and 1999, there were no homicidal deaths in which drugs or poisons were the primary cause of the death, although the victim may have been under the influence of drugs at the time of the fatal incident.

The classification of undetermined manner is used when the circumstances surrounding the drug death does not allow clarification of whether the fatal intoxication was intentional, unintentional ("recreational"), or involved another person's actions. In the year 2001 there were 21 deaths of undetermined manner attributed to drugs and poisons compared to 28 in 2000, 11 in 1999, 28 in 1998, 3 in 1997, and 21 in 1996.

In 2001 there were 20 suicides attributed to drugs/poisons as compared to 29 in 2000, 35 in 1999 and 27 in 1998.

There were 124 accidental overdoses of drugs/poisons in 2001 compared to 177 in 2000, 164 in 1999, 179 in 1998, and 155 in 1997. The 2001 rate equals a 30% decrease in accidental overdoses compared to the year 2000. However, 2001 accidental drug deaths comprised 30% (124/419) of all accident deaths.

In 2001, 50% (82/165) of all deaths due to drugs and poisons involved cocaine or opiates¹, often in combination. This compares with 62% (146/234) in 2000, 70% (148/210) in 1999, and 71% (165/234) in 1998. Opiates were the most frequently implicated drug, either alone or in combination, comprising 39% (64/165) of the drug caused deaths. This is a marked decrease compared to the 105 opiate deaths in 2000 and from the 134 opiate deaths in 1999.

Cocaine, either alone or in combination with other drugs, was implicated in 28% (46/165) of the 2001 drug caused deaths. These 46 cocaine deaths compare with 93 deaths in 2000, 73 in 1999, 70 in 1998, 62 in 1997 and 72 in 1996.

Of the combined drug intoxications involving either cocaine or opiates, 28 involved both cocaine and opiates (and possibly other drugs). Use of opiates and cocaine predominated in accidental and undetermined drug caused deaths.

Ethanol (alcohol) is also a drug to be critically examined for its contribution to the circumstances surrounding death. In 2001, five accidental deaths were attributed to acute ethanol intoxication where ethanol was the single substance used. There were 32 deaths where ethanol, in combination with other drugs, was the cause of death. Blood alcohol (ethanol) tests were performed in 77% (739/959) of non-natural deaths. Blood alcohol tests are only performed when death occurs within 24 hours of the initial injury/event. Positive blood alcohol levels were detected in 30% (224/738) of non-natural deaths where tests were performed.

Blood alcohol tests are performed on most persons who die within 24 hours of the incident. It should be noted that in many cases of traffic and homicide deaths, persons responsible for the death other than the decedent were under the influence of alcohol. The blood alcohol data is presented to show the levels of alcohol among those that died, but does not reflect the presence of alcohol among all parties involved.

¹ When the term "opiates" is used in this section, the drug detected by analysis is either heroin and/or morphine.

Table 9-1 Blood Alcohol Testing and Manner of Death

Test Results	ACCIDENT	TRAFFIC	HOMICIDE	NATURAL	SUICIDE	UNDETERMINED	TOTAL
Tested	259	182	68	369	173	56	1107
<i>positive</i>	71	60	23	75	51	19	299
<i>negative</i>	188	122	45	294	122	37	808
Not tested	160	38	6	250	10	7	471
Total	419	220	74	619	183	63	1578

Table 9-2 Blood Alcohol Testing as a Percentage by Manner

Test Results	ACCIDENT	TRAFFIC	HOMICIDE	NATURAL	SUICIDE	UNDETERMINED	TOTAL
Tested	62%	83%	92%	60%	95%	89%	70%
<i>positive</i>	27%	33%	34%	20%	29%	34%	27%
<i>negative</i>	73%	67%	66%	80%	71%	66%	73%
Not tested	38%	17%	8%	40%	5%	11%	30%

Drugs included in Categories in Tables 9-3 through 9-6

<u>Drug Classification</u>	<u>Drug Name</u>
1. Alcohol/Ethanol	
2. Analgesics	Acetaminophen, aspirin, butalbital, ibuprofen, naproxen, salicylate, tramadol
3. Anesthetic Agent	Ketamine
4. Anticonvulsants	Carbamazepine, gabapentin, phenytoin, valproic acid
5. Antidepressants	Amitriptyline, bupropion, citalopram, clomipramine, desmethyldoxepin, desimipramine, doxepin, fluoxetine, imipramine, nafazadone, nortriptyline, paroxetine, sertraline, trazodone, venlafaxine
6. Antihistamines	Chlorpheniramine, dextromethorphan, diphenhydramine, doxylamine,
7. Antipsychotics	Chlorpromazine, clozapine, quetiapine
8. Barbiturates	Butalbital, pentobarbital, phenobarbital, secobarbital
9. Cardiac Medications	Digoxin, diltiazem, propranolol, verapamil
10. Cocaine (Stimulant)	
11. Gastrointestinal Medications	Metoclopramide
12. Inhalant – Solvent	Toluene
13. Marijuana	THC, cannabinoids
14. Muscle Relaxants	Baclofen, carisoprodol, cyclobenzaprine, meprobamate, methocarbamol, quinine
15. Opiates/opioids	Acetaminadol, codeine, dihydrocodeine, fentanyl, heroin, hydrocodone, hydromorphone, meperidine, methadone, morphine, oxycodone, pentazocine, propoxyphene, sufentanil
16. Other	Antipyrine, diltiazem, pentoxifylline, trichloroethanol
17. Stimulants	Amphetamine, diethylpropion, methamphetamine
18. Stimulants/Hallucinogens	MDMA
19. Tranquilizers/sleeping aids	Alprazolam, buspirone, chlordiazepoxide, diazepam, diphenhydramine, flurazepam, hydroxyzine, lorazepam, nordiazepam, oxazepam, promethazine, propofol, temazepam, thioridazine, venlafaxine, zolpidem
Note: Certain drugs (e.g. diphenhydramine) may be classified into more than one category.	

Table 9-3 Combined Effects of Ethanol (Alcohol) and:

	MANNER			Totals
	Accident	Suicide	Undetermined	
Ethanol (Alcohol) Only				
Ethanol (Alcohol) Only	5	0	0	5
Analgesic				
Acetaminophen	1	0	0	1
Analgesic, tranquilizers				
Acetaminophen, diphenhydramine	0	1	0	1
Antidepressants, antihistamine, opiate, tranquilizer				
Citalopram, doxepin, trazodone, diphenhydramine, opiates, promethazine	1	0	0	1
Antidepressant, Rx Opiate, tranquilizer				
Citalopram, oxycodone, diphenhydramine, temazepam	0	1	0	1
Cocaine				
Cocaine	4	0	0	4
Cocaine, antidepressant, opiate				
Cocaine, trazodone, opiate	1	0	0	1
Cocaine, Rx opiate				
Cocaine, methadone	1	0	0	1
Cocaine, Rx opiates, tranquilizers, antihistamine				
Cocaine, codeine, methadone, diazepam, promethazine, dextromethorphan	1	0	0	1
Opiates				
Opiates	3	0	1	4
Opiates, analgesics				
Opiates, tramadol	1	0	0	1
Opiates, cocaine				
Opiates, cocaine	5	0	0	5
Opiates, tranquilizer				
Opiates, diazepam	1	0	0	1
Opiates, promethazine	1	0	0	1
Opiates, antidepressants, tranquilizer				
Opiates, sertraline, trazodone, hydroxyzine	1	0	0	1
Opiates, Rx opiates, tranquilizer				
Opiates, oxycodone, propoxyphene, hydroxyzine	1	0	0	1

Table 9-3 (Con't) Combined Effects of Ethanol (Alcohol) and:

	MANNER			Totals
	Accident	Suicide	Undetermined	
<i>Rx opiates</i>				
<i>Methadone</i>	2	0	0	2
<i>Rx opiate, antidepressants</i>				
<i>Fentanyl, trazodone</i>	1	0	0	1
<i>Oxycodone, doxepin, fluoxetine</i>	1	0	0	1
<i>Rx opiate, cocaine, stimulate</i>				
<i>Oxycodone, cocaine, methamphetamine</i>	1	0	0	1
<i>Tranquilizers</i>				
<i>Chlordiazepoxide</i>	1	0	0	1
<i>Diphenhydramine</i>	1	0	0	1
<i>Ethanol Combined With Other Drugs Total</i>	34	2	1	37

Table 9-4 Single Drug/Poison Caused Deaths

	MANNER			Totals
	Accident	Suicide	Undetermined	
Analgesics				
Acetaminophen	0	1	0	1
Salicylate	1	0	1	2
Antidepressants				
Amitriptyline	0	1	0	1
Doxepin	0	0	1	1
Lithium	1	0	0	1
Antipsychotic				
Olanzapine	0	0	1	1
Cocaine				
Cocaine	6	0	2	8
Opiates				
Opiates	20	0	0	20
Other				
Chloroform	0	0	1	1
Rx Opiates				
Methadone	5	0	0	5
Morphine	0	1	0	1
Oxycodone	1	1	1	3
Stimulants (other than cocaine)				
Amphetamine	1	0	0	1
MDMA	2	0	0	2
Methamphetamine	1	0	0	1
Tranquilizers				
Diphenhydramine	0	0	1	1
Venlafaxine	0	2	0	2
Single Drugs/Poisons Totals	38	6	8	52

Table 9-5 TWO DRUGS/POISONS CAUSING DEATH

	MANNER			Totals
	Accident	Suicide	Undetermined	
Anticonvulsants				
Phenytoin, valproic acid	0	1	0	1
Antidepressants				
Bupropion, nortriptyline	1	0	0	1
Antidepressant, analgesic				
Amitriptyline, tramadol	1	0	0	1
Antidepressant, antipsychotic				
Citalopram, olanzapine	0	0	1	1
Doxepin, clozapine	1	0	0	1
Nortriptyline, olanzapine	0	1	0	1
Antidepressant, cardiac medicine				
Trazodone, diltiazem	0	1	0	1
Antidepressant, tranquilizer				
Nortriptyline, oxazepam	0	0	1	1
Cocaine, antidepressant				
Cocaine, citalopram	1	0	0	1
Cocaine, Rx opiates				
Cocaine, methadone	1	0	0	1
Cocaine, morphine	1	0	0	1
Cocaine, stimulants				
Cocaine, methamphetamine	1	0	0	1
Cocaine, tranquilizer				
Cocaine, diphenhydramine	1	0	0	1
Opiates, antidepressants				
Opiates, trazodone	0	0	1	1
Opiates, cocaine				
Opiates, cocaine	12	0	1	13
Opiates, muscle relaxant				
Opiates, meprobamate	0	1	0	1

Table 9-5 (Con't) TWO DRUGS/POISONS CAUSING DEATH

	MANNER			Totals
	Accident	Suicide	Undetermined	
<i>Rx opiates</i>				
<i>Methadone, morphine</i>	1	0	0	1
<i>Methadone, oxycodone</i>	1	0	0	1
<i>Rx opiate, antidepressants</i>				
<i>Methadone, doxepin</i>	1	0	0	1
<i>Methadone, trazodone</i>	0	0	1	1
<i>Oxycodone, citalopram</i>	1	0	0	1
<i>Oxycodone, paroxetine</i>	1	0	0	1
<i>Rx opiates, tranquilizers</i>				
<i>Oxycodone, diphenhydramine</i>	0	0	1	1
<i>Methadone, promethazine</i>	1	0	0	1
<i>Tranquilizer, barbiturate</i>				
<i>Diphenhydramine, phenobarbital</i>	0	1	0	1
<i>Multiple Drugs/Poisons Total</i>	26	5	6	37

Table 9-6 Three or More Chemical Agents

	MANNER			Totals
	Accidents	Suicide	Undetermined	
Antidepressants, antipsychotic, opiate, cocaine				
Fluoxetine, trazodone, olanzapine, opiate, cocaine	1	0	0	1
Antidepressant, antipsychotic, anticonvulsant, tranquilizer				
Sertraline, olanzapine, carbamazepine, desipramine	0	0	1	1
Antidepressants, opiates				
Doxepin, desmethyldoxepin, opiates	1	0	0	1
Antidepressants, opiate, other				
Mirtazepine, sertraline, opiate, pentoxifylline	1	0	0	1
Antidepressants, tranquilizer				
Amitriptyline, bupropion, zolpidem	0	1	0	1
Antidepressants, tranquilizer, analgesic				
Mirtazepine, sertraline, hydroxyzine, tramadol	0	1	0	1
Antidepressants, tranquilizers, other				
Trazodone, venlafaxine, carisoprodol, chlordiazepoxide, meprobamate, nordiazepam, oxazepam, antipyrine	0	0	1	1
Opiate, antidepressant, tranquilizer, antihistamine				
Opiate, doxepin, hydroxyzine, dextromethorphan	0	0	1	1
Opiate, antidepressant, tranquilizers, stimulate				
Opiate, sertraline, diazepam, meprobamate, methamphetamine	1	0	0	1
Opiate, Rx opiate, cocaine				
Opiate, methadone, cocaine	1	0	0	1
Opiate, Rx opiate, tranquilizer, cocaine				
Opiate, hydrocodone, alprazolam, cocaine	1	0	0	1
Opiate, oxycodone, alprazolam, cocaine	1	0	0	1
Opiates, stimulate, cocaine				
Opiates, methamphetamine, cocaine	1	0	0	1
Opiates, tranquilizer, cocaine				
Opiates, desipramine, cocaine	1	0	0	1
Opiate, carisoprodol, diazepam, meprobamate, promethazine, cocaine	1	0	0	1
Rx opiate, antidepressant, antihistamine				
Methadone, amitriptyline, nortriptyline, dextromethorphan	1	0	0	1
Rx opiate, antidepressant, antipsychotics, anticonvulsant				
Oxycodone, gabapentin, olanzapine, quetiapine, gabapentin	0	0	1	1
Rx opiate, antidepressant, barbiturate				
Hydrocodone, sertraline, secobarbital	0	1	0	1
Rx opiate, antidepressant, cardiac medicine				
Codeine, imipramine, verapamil	0	0	1	1

Table 9-6 (Cont...) Three or More Chemical Agents

	MANNER			Totals
	Accidents	Suicide	Undetermined	
<i>Rx opiate, antidepressant, cocaine</i>				
<i>Fentanyl, fluvoxamine, cocaine</i>	1	0	0	1
<i>Rx opiates, antidepressants, tranquilizer</i>				
<i>Hydrocodone, citalopram, diazepam</i>	1	0	0	1
<i>Methadone, citalopram, alprazolam</i>	1	0	0	1
<i>Methadone, citalopram, trazodone, temazepam</i>	1	0	0	1
<i>Methadone, oxycodone, fluoxetine, diazepam</i>	1	0	0	1
<i>Methadone, oxycodone, sertraline, trazodone, hydroxyzine</i>	1	0	0	1
<i>Morphine, citalopram, nortriptyline, diazepam</i>	1	0	0	1
<i>Oxycodone, amitriptyline, diazepam</i>	1	0	0	1
<i>Rx opiate, antidepressants, tranquilizer, barbiturate, antihistamines</i>				
<i>Codeine, amitriptyline, nortriptyline, meprobamate, butalbital, doxylamine, dextromethorphan, diphenhydramine</i>	0	0	1	1
<i>Rx opiate, antidepressants, tranquilizer, stimulant</i>				
<i>Hydrocodone, mirtazepine, lorazepam, diethylpropion</i>	0	0	1	1
<i>Rx opiate, antidepressant, tranquilizer, muscle relaxant</i>				
<i>Methadone, cyclobenzaprine, chlordiazepoxide, cyclobenzaprine</i>	1	0	0	1
<i>Rx opiate, antidepressant, barbiturate</i>				
<i>Codeine, amitriptyline, butalbital</i>	1	0	0	1
<i>Rx opiates, tranquilizers</i>				
<i>Codeine, hydrocodone, meprobamate, venlafaxine</i>	1	0	0	1
<i>Methadone, promethazine, hydroxyzine</i>	1	0	0	1
<i>Rx opiates, tranquilizers, cardiac medicine</i>				
<i>Codeine, morphine, diazepam, doxepin</i>	0	1	0	1
<i>Rx opiate, tranquilizer, cocaine</i>				
<i>Dihydrocodeine, diazepam, cocaine</i>	1	0	0	1
<i>Rx opiate, tranquilizer, opiate, cocaine</i>				
<i>Methadone, venlafaxine, opiate, cocaine</i>	1	0	0	1
<i>Rx opiate, tranquilizer, stimulate</i>				
<i>Oxycodone, zolpidem, acetaminophen</i>	0	1	0	1
<i>Tranquilizers, opiate, cocaine</i>				
<i>Carisoprodol, diazepam, meprobamate, opiate, cocaine</i>	1	0	0	1
<i>Tranquilizers, analgesic</i>				
<i>Venlafaxine, zolpidem, tramadol</i>	0	1	0	1
<i>Multiple Drugs/Poisons Totals</i>	26	6	7	39

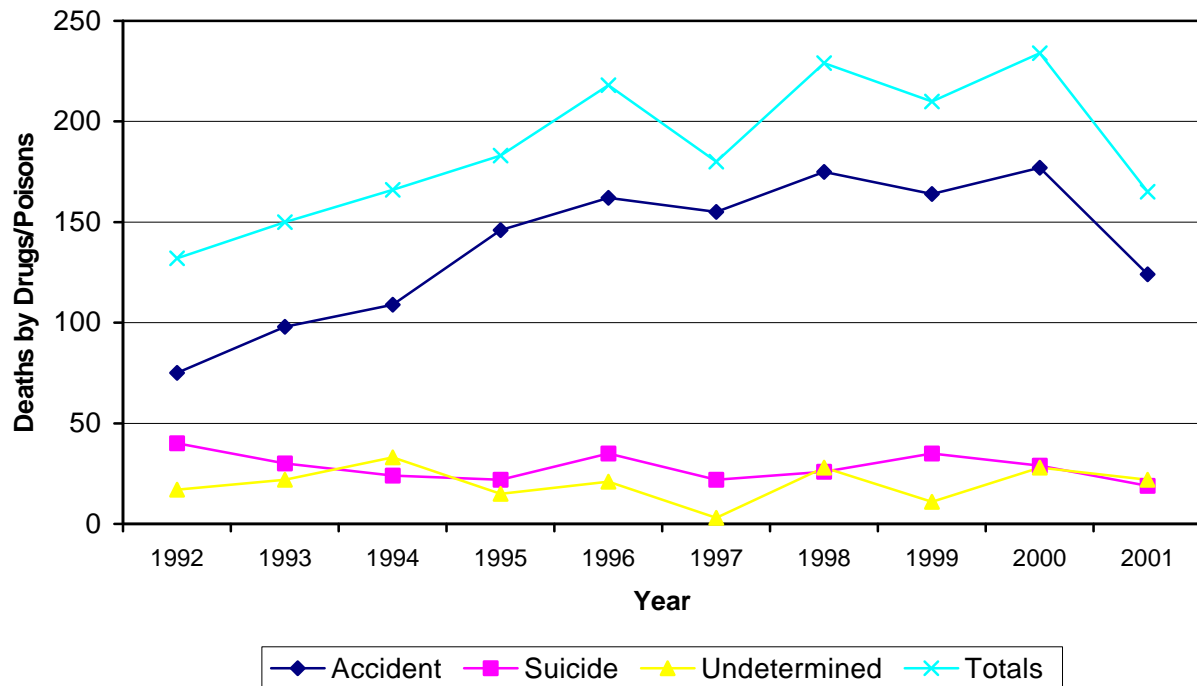
Graph 9-1 Deaths Caused by Drug/Poison 1992-2001**Comparison of Manner of Death among Drug/Poison Caused Deaths 1992-2001**

Table 9-7 Drug Caused Deaths Involving Cocaine, Opiates: 1995-2001

DRUG COMBINATIONS FOUND	YEAR OF DEATH						
	1995	1996	1997	1998	1999	2000	2001
Cocaine alone	6	14	7	7	11	30	8
Cocaine and opiates	28	28	17	14	29	18	13
Cocaine, opiates, and others ¹	27	20	26	40	28	34	15
Cocaine, others without opiates ¹	6	10	12	9	3	11	10
Opiates alone	32	30	26	31	34	18	20
Opiates, others without cocaine ¹	45	56	43	64	43	35	16
Subtotal, cocaine or opiate involved	144	158	131	165	148	146	82
Percentage, cocaine or opiate involved	79%	72%	72%	71%	70%	62%	50%
Subtotal, cocaine involved	67	72	62	70	71	93	46
Percentage, cocaine involved	37%	33%	34%	30%	34%	40%	28%
Subtotal, opiate involved	132	134	112	149	134	105	64
Percentage, opiates involved	72%	61%	62%	64%	64%	45%	39%
Rx Opiates involved ²	N/A	N/A	N/A	N/A	N/A	N/A	51
Percentage, Rx Opiate(s) involved	N/A	N/A	N/A	N/A	N/A	N/A	31%
All Drug-Caused Deaths	183	218	181	234	210	234	165
All Deaths Under KCME Jurisdiction	1,504	1,558	1,491	1,507	1,472	1,506	1,578

¹ Note: "Others" may include Rx Opiates.

² Note: Rx Opiate involvement may be included in other categories.

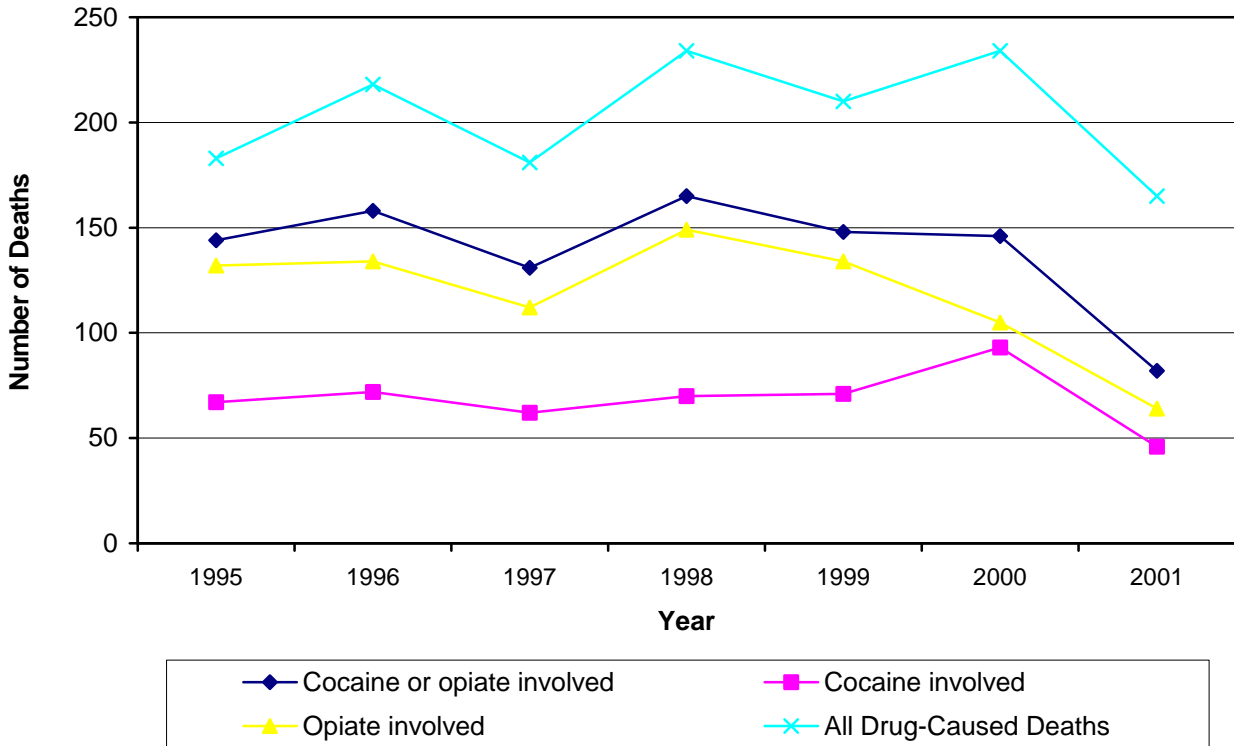
Graph 9-2 Drug Caused Deaths Involving Cocaine, Opiates: 1995-2001

Table 9-8 Drug and Poison Deaths and Age Group of the Decedent

AGE GROUP (YEARS)	MANNER OF DEATH			SUB TOTAL	TOTAL
	ACCIDENT	SUICIDE	UNDETERMINED		
<20	3	1	3		7
Male	2	0	3	5	
Female	1	1	0	2	
20-29	19	1	1		21
Male	12	0	0	12	
Female	7	1	1	9	
30-39	36	4	5		45
Male	26	3	1	30	
Female	10	1	4	15	
40-49	49	7	2		58
Male	36	5	1	42	
Female	13	2	1	16	
50-59	13	3	9		25
Male	8	2	5	15	
Female	5	1	4	10	
60-69	4	0	0		4
Male	4	0	0	4	
Female	0	0	0	0	
70-79	0	2	1		3
Male	0	1	0	1	
Female	0	1	1	2	
80-89	0	0	0		0
Male	0	0	0	0	
Female	0	0	0	0	
90+	0	2	0		2
Male	0	1	0	0	
Female	0	1	0	0	
Total	124	20	21		165

Graph 9-3 Drug and Poison Deaths and Age Group of the Decedent